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M. E's, E. M's and Experts.

Some remarks in the issue of Nov. 6th, discussing mining engineers, their requirements, qualification, etc., have been widely reproduced. A writer in a recent issue of the British Columbia Mining Record speaks thus on the subject of "M. E's, E. M's and Experts."

"That there are many men practicing as mining engineers in this province and elsewhere who have never had the necessary training is unfortunately too true. Real estate men, drummers, fishermen, insurance agents and so forth are all to be found here and elsewhere in this western country posing as M. E's or E. M's, and in more than one of the prospectuses which have been issued for the purpose of obtaining subscriptions from the British Pacific, the statements made to influence subscribers are those of men belonging almost entirely to the classes above. Should failure await such enterprises, can any one wonder? Only at the stupidity and gullibility of the subscribers. The so-called mining engineers may be to blame; as a rule there is an absence of evidence on that point, but the subscribers we know are to blame, and much more than they—the promoters who, in cases of the kind named, are only anxious to put before the public opinions that will induce subscriptions, altogether regardless of the merits or demerits of the properties offered.

In this connection let me repeat a story which may or may not be literally true. I give it as told to me. Within a hundred miles of the town of Roseland is a so-called mining engineer or expert who, when approached by a client as to the making of a report on any mining property puts the very pertinent question: "What do you want, a report on the facts or only a favorable opinion?" Asked as to his fees, he says: "A report on facts will cost you \$500, a favorable opinion 2,000." So long as there are people who want merely favorable opinions which will enable them to sell their "wildcats"—and unfortunately such people are not rare—so long will experts of the stamp alluded to find a vocation."

There is no effect without a cause, and where there is a supply it is almost invariably in response to a demand. To give a favorable opinion on a mining property it is not necessary to have the elaborate training of a mining engineer. Those most familiar with mines can give a favorable opinion, and generally the appreciation is inversely proportional to their knowledge. The opinions so given need not necessarily be dishonest, for the so-called expert who has probably never seen the inside of a mine, or, at most, only been in a few short tunnels driven into the hillsides, is as easily gulled as the most ordinary layman who does not effect the expert's garb and initials. "Salting" for such men would be a waste of time.

Other types of so-called mining engineers are they whose vocation is, or has been, more or less associated with mines. It may have been as assayers or surveyors. Both these classes of men may, some day, make engineers, with other and more varied experience, as both of them have had part of the training necessary for a mining engineer, but to speak of either of them as a mining engineer would be as inaccurate as to call the tail board of a violin an instrument of music. This class of men usually realize, to some extent, their weakness, and by way of safety, if not prepared to sell favorable opinions, they "turn down" most of the properties inspected.

Of course, between mining engineers, who have had the necessary training, there are great differences; some have had much more experience than others, and even between those having equal experience there is frequently great disparity. A man's ability is compounded of two factors—heredity and environment. The latter includes education or experience, the former those mental and physical qualities which, in absence of a better name, are often called natural ability. "We do not come into existence as sheets of white paper on which the world can write anything it pleases"—either technically or morally.

Let us see what is required of a min-

ing engineer. He may have to make topographical, geographical and mineralogical surveys, for which purpose it is necessary that he should have a thorough knowledge of surveying, stratigraphical geology and mineralogy. He frequently has to say whether certain ore deposits are or are not workable commercially, and to do that he must have a thorough knowledge of stratigraphical geology, mineralogy, the various operations of mining, the several processes of ore treatment, the nature and uses of mining machinery, and the average life of different kinds of deposits. Or, again, he may have to conduct the operations of a mine already partially or wholly opened out. In that case, it is necessary that he should be a good stratigraphist, have a thorough knowledge of mining operations, the processes of ore treatment, the uses of mining machinery, and also of the numerous subsidiary books required about a mine.

Of all the various kinds of work that a mining engineer is called upon to do, there is not one which demands such a wide range of knowledge as that of reporting on undeveloped properties, and yet that is the very kind of work so-called experts, who have had no experience in mining, profess to do. "Gill" alone could not brace itself to such presumption. Ignorance might, but ignorance and gall combined assuredly could and do.

It is of the first importance that a mining engineer should be practical, and that there may be no mistake about this statement we will define. By practical, as here used, is meant the faculty of aptitude that comes to a man from constant practice of the particular pursuit in which after proper training he is engaged. A mining engineer cannot be produced in a college of chemical laboratory, although in both these places he will obtain part of his preliminary training; but it is on the mountain sides and in and about the mine and workshops that he learns these branches of his profession that are of the greatest commercial value. And let it never be forgotten that the mining engineer who is a commercial failure cannot be more than a very partial technical success. The man who cannot make his mining pay had better become an expert—at something else. It is sometimes contended that the best person to direct the operations of a mine is a practical miner. Let us see what truth there is in this contention. The experience of a practical miner is confined to pounding a drill, shot firing, driving a shovel and setting up timbers. These operations bear about the same relation to the complex requirements of a mining engineer that unconnected bolts, rivets and plates do to a finished steamship. If by a display of extra ability, or for any other reason, the miner finds himself acting as the foreman of a mine, his experience is a little widened, but not much; and if in later years he should chance to become a superintendent, he has then an opportunity of familiarizing himself with one or more of the various processes of ore treatment, and the erection and use of machinery. But it will readily be seen that his experience even then falls short of that necessary to the mining engineer. Not only so, but his preliminary training is altogether insufficient to enable him to discharge the duties of the latter. A mining engineer's general training should include—besides a good ordinary scholastic education—mathematics, physics, chemistry and geology."

The President Still Hopes for Bimetallism.

A Herald dispatch from Washington says: President McKinley and Secretary Gage are not in entire accord on the subject of monetary reform. The President is still in favor of international bimetallism, while his secretary of the treasury believes that with the failure of the Wolcott mission to Europe all hope of an international agreement for the enlarged use of silver perished.

There is no suggestion of international bimetallism, or any other kind of bimetallism, in the plan which Secretary Gage will submit to Congress in his annual report. The message which President Mc-

Kinley will send to Congress will not endorse Secretary Gage's scheme in its entirety. The President will not give his approval to the gold-bond feature of the scheme, without which the whole structure is valueless.

Since his return from Europe Senator Wolcott has had several long talks with the President and has succeeded in impressing him with the belief that there is a possibility of bringing about an agreement between the United States and the principal commercial nations of Europe for a larger use of silver. But for the influence of Senator Wolcott it is believed the President would have endorsed the plan of his Secretary of the Treasury in its entirety.

Messrs. Brice of Chicago, Emmons of New York, Brazelle of St. Louis and Marshall of Nebraska have each declared their ability to manufacture gold, thus obviating the necessity of mining it. Mr. Brazelle alleges that "from common clay" he can "turn out gold, silver, iron, calcium, aluminum, and a number of other metals as yet unknown to science." His investigations have demonstrated that "there are but three primary metals—copper, lead and iron—which cannot be separated into component parts." He believes that by his process gold and silver will be turned out in such large quantities that all governments will be compelled to demonetize them. The company which has been formed to work Mr. Brazelle's process will, however, considerably confine its operations to the manufacture of aluminum, calcium, glaciun, and serum, one of the new metals, which Mr. Brazelle says is destined to take the place of steel. According to the dailies Mr. Brice is about to begin the manufacture of gold in Chicago in such quantities as to destroy the vocation of the miner. Duly mindful of the requirements of the situation, Mr. Brice has begun contracting for antimony and has already engaged three carloads a week from Utah. There are possibilities in that direction in the Coeur d'Alene, and, if Mr. Brice, is financially able to purchase all the antimony offered, he may at least occasion increase market for that useful metal. —M. & S. Press.

Rev. Dr. Henry Frank of Dover, New Jersey, recently made a tour among some of the churches in greater New York and was very much surprised to discover that a number of them favor an aristocracy of wealth that seeks the humiliation of the masses and manifests the utmost contempt for the poor.

He went in the garb of a respectable mechanic to see whether any wealthy church would receive him cordially. In one church he stood 17 minutes, and then went out because no usher offered him a seat. In another church he took a seat, but very soon a large man laid a heavy hand upon his shoulder and brusquely demanded to know what right he had there and ordered him out. In another he stood eleven minutes waiting, hat in hand, to be asked to take a seat. The ushers eyed him from head to foot, and, judging from his appearance that he was a poor mechanic, superciliously passed him by. Every movement they made seemed to say, "Get out of here," and therefore he left.

He visited five churches and was treated similarly by all. At the close of the day he was fully convinced that, while mechanics may be exemplary Christians, their presence in the wealthy churches of greater New York is not tolerated.

Late Literary News.

What would you do if war should be declared tomorrow with a European power? How would it change your home life, the lives of your brother and other relatives? How would it affect your business connections and business? What change would it make in financial, city, state and national affairs? It is these interesting problems which a writer in the December Cosmopolitan has undertaken to sketch under the heading of "A Brief History of Our Late War With Spain," at the same time vividly describing the exciting scenes which would attend the opening of hostilities. This same number of the Cosmopolitan has an article on "The Well-dressed Woman" by Elsie de Wolfe, a contrast of the characters of Henry George and Charles A. Dana by John Brisson Walker in another place "The Loves of Goethe," while Wells' story "The War of the Worlds," which has been so widely read, reaches its conclusion in an unexpected way.

Copper production in the United States in October, as reported by John Stanton, statistician for the producing companies, reached, says the New York Engineering and Mining Journal, a total of 17,541 tons and was closely up to the average of the ten months of the present year. It shows, however, a decrease of 3½ per cent from October of last year, and is considerably below that of the earlier months of the present year. The total United States production for the ten months ending with October was 176,388 tons, which was greater by 4 per cent than in the corresponding period last year. Exports of copper from the United States showed a considerable decline as compared with previous months, and were 2586 tons less than in October, 1896. The total this year has been 108,975 tons, which is 8384 tons more than last year. Our exports this year have been 62 per cent of our production. The foreign production shows little change this year; but the consumption abroad seems to keep up very well, in spite of the long strike in Great Britain and causes for decreased demand.

The problem of how to utilize the vast quantities of mesquite beans that grow on the prairies of the southwest has, it is believed, been solved. Numerous experiments at converting the bean into a marketable commodity have been made in recent years, but have been productive of no permanent results. A. J. Conley, manager of the Loring cotton oil mill, believes he has solved the problem. He had gathered a ton of mesquite beans and treated them in the same manner as cotton seed. From the ton of beans he secured 16½ gallons of clear, amber colored oil, very rich and with a very pleasant, aromatic smell. The cake is dark brown, quite oily and is eaten greedily by stock. It is a well known fact that stock fatten rapidly on the beans and that the year when the crop is a heavy one is always a prosperous one for stockmen. This year the beans are very plentiful, thousands of tons of them falling from the trees and rotting. If they could be saved in the shape of oil cake, there would be almost enough to carry stock through the winter.—Stockman.

Mark Twain's New Story

Mark Twain's new humorous story, which he is now writing in Vienna, is to go to The Ladies' Home Journal, which magazine has also secured F. Marion Crawford's new story, which is a tale of the unreal, with the strikingly uncanny title of "The Dead Smile."

The Oasis truly says: During the school days the parents should be very careful how they speak of teachers before children. If there is any fault to be found with the teacher by parents it should be talked in private and not in the hearing of children. They are wonderful imitators, and if they hear anything of the kind they very naturally will do the same, many times injuring both teacher and pupils, but the pupils most. Teachers, as a rule, are competent or they would not be employed. They have a great responsibility on their shoulders, and parents should do all in their power to help them, instead of to hinder. It would be well to consider these subjects carefully, and to co-operate with the teacher and pupil in their work. The result will be better work and progress.

AN IDEAL INVESTMENT!

HUNDREDS and thousands of our shrewd business men all over the country are looking for an ideal investment. Impelled by this impulse they visit distant regions and investigate many possibilities. Some put their money into mines, some into lumber lands, some into ranching, others into orange groves, or corner lots in cities not yet built and perhaps never will be, others purchase stock in industrial enterprises, or become silent partners in business firms, or interested in patent rights or the formation of syndicates. What a spectacle do these men, found by scores in every city and sizable village, present who thus convert the noble race for solid wealth into a wild scramble for immediate and rapid gains?

They are all seeking an ideal investment; something better than the ordinary. That is what they are after. But what is an ideal investment?

An ideal investment of money, whether for one's self or his heirs, is one, in the first place, that is absolutely safe. This is a prime essential. Without it no investment is worth a moment's attention from a prudent man.

In the second place, it must yield a good rate of interest, and if the interest can be compounded, so much the better. A CONSERVATIVE RATE OF COMPOUNDING IS A HIGH RATE OF INTEREST ALWAYS. Such an investment will, in the long run, beat the best speculation or profitable business out of sight.

Thirdly, an ideal investment must be untouched by taxation, that sapper of net returns. Fourthly, it must require no personal supervision, for that multiplies a man's cares and arbitrarily limits his movements so that he becomes a slave to his investments, as many unwisely do. And lastly, an ideal investment must be uninterrupted, undisturbed, untouched by death, but continue to pour its returns, with undiminished measure, in a beneficent tide, for the support and enrichment of those to whom the investor has benevolently left it. Do you know, reader, that such an ideal investment is offered to you in a policy of The Mutual Life Insurance Company? Would it not be wise for you to look into the matter? For particulars as to cost and different forms of policies, etc., address

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